

Title (en)  
Microcomputer with flash memory.

Title (de)  
Mikrocomputer mit Flash-Speicher.

Title (fr)  
Micro-ordinateur avec mémoire flash.

Publication  
**EP 0617377 A2 19940928 (EN)**

Application  
**EP 94103180 A 19940303**

Priority  
JP 8532893 A 19930320

Abstract (en)  
A one-chip type microcomputer or microprocessor includes a one-time programmable flash memory (FMRY) and a central processing unit (CPU) allowed to access the flash memory. The flash memory (FMRY) further includes a plurality of electrically erasable and programmable non-volatile memory elements arranged in a matrix pattern. The non-volatile memory element is made reprogrammable by erasure and writing only when a test mode (an operation mode exclusively utilizable by manufacturers of microcomputers) is designated by an external terminal (15). On the other hand, the flash memory is set one-time programmable by writing in a non-test mode (an operation mode inclusively utilizable by users of microcomputers) designated by the external terminal. The one-chip microcomputer or microprocessor is sealed in a plastic package with a pin-to-pin pitch of 0.5 mm or less. <IMAGE>

IPC 1-7  
**G06F 15/78**

IPC 8 full level  
**G06F 15/78** (2006.01); **G11C 29/46** (2006.01); **G11C 29/52** (2006.01)

CPC (source: EP KR)  
**G06F 15/00** (2013.01 - KR); **G06F 15/7814** (2013.01 - EP); **G11C 29/46** (2013.01 - EP); **G11C 29/52** (2013.01 - EP)

Cited by  
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DE FR GB IT

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**EP 0617377 A2 19940928**; **EP 0617377 A3 19950208**; JP H06274656 A 19940930; KR 940022295 A 19941020

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**EP 94103180 A 19940303**; JP 8532893 A 19930320; KR 19940005458 A 19940318